

Application No.: 10/046,812

Docket No.: 4481-044

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): An electrical circuit comprising:
a first circuit having associated therewith a first track for supporting, in use, a first current; and
a second circuit for drawing, in use, a second current, the second circuit located proximate to the first track;
~~the electrical circuit characterised by:~~
an electrical shield providing an electrically isolated enclosure, the electrical shield ~~positioned substantially about entirely enclosing the first track, and such that the shield being arranged for preventing~~ inhibits, in use, ~~shorting-short circuiting~~ of the first track to the second circuit ~~for restricting to restrict~~, in use, substantial summing of the first current with the second current.
2. (currently amended): The electrical circuit of claim 1, wherein the shield, in use and under fault conditions, ~~inhibits~~ is arranged for inhibiting establishment of a short circuit supporting flow of a current greater than a predetermined threshold through an electrical component.
3. (currently amended): The electrical circuit of claim ~~12~~, wherein the electrical component ~~is includes~~ a laser diode.

Applicati n No.: 10/046,812

Docket No.: 4481-044

4. (currently amended): The electrical circuit of claim 1, wherein the second circuit ~~is~~ includes a track.

5. (previously presented): The electrical circuit of claim 1, wherein the shield comprises at least one metal layer within an integrated circuit and at least one via.

6. (previously presented): An electrical device comprising the electrical circuit of claim 1.

7. (previously presented): An integrated circuit or printed circuit board comprising the electrical circuit of claim 1.

8. (canceled)

9. (previously presented): An integrated circuit or printed circuit board comprising the electrical device of claim 6.

10. (new) An integrated circuit comprising
a substrate,
peripheral bonding pads on the substrate,
a laser diode having first and second electrodes respectively connected to first and second of the bonding pads,

a first circuit mounted on the substrate, the first circuit having (a) a first terminal connected to a grounded bonding pad and (b) a second terminal connected to the second bonding pad and thence to the first electrode of the laser diode for supplying current to the laser diode,

a second circuit mounted on the substrate having a terminal connected to one of the bonding pads,

a conducting track having first and second opposite ends respectively connected to one of the bonding pads and a further terminal of the first circuit, the track including a portion

Application No.: 10/046,812

Docket No.: 4481-044

extending across the second circuit,

and a shield entirely enclosing the portion of the track extending across the second circuit for preventing short circuiting of the track to the second circuit and thereby preventing excessive current flow through (a) the first terminal, (b) the first bonding pad and (c) the laser diode electrodes.

11. (new) The integrated circuit of claim 10 wherein the second circuit includes at least one transistor,

a trace for supplying current to at least one transistor of the second circuit, the at least one transistor of the second circuit being connected for supplying current to the second electrode,

the track being connected to supply current to at least one transistor of the first circuit, the at least one transistor of the first circuit being connected for supplying current to the first electrode via the first bonding pad,

the track and trace being located such that a short circuit between them is likely to result in excessive current being supplied to the laser diode via the first and second bonding pads, the shield being interposed between the track and trace for preventing such a short circuit.

12. (new) An integrated circuit comprising
a substrate carrying peripheral bonding pads,
a laser diode having first and second electrodes respectively connected to first and second of the bonding pads,

a first circuit mounted on the substrate, the first circuit having a (a) first terminal connected to a grounded bonding pad and a second terminal connected to the first bonding pad and thence to the first electrode of the laser diode, and (b) a second terminal connected to the first bonding pad and thence to the first electrode of the laser diode for supplying current to the

Application No.: 10/046,812**Docket No.: 4481-044**

laser diode,

a second circuit mounted on the substrate, the second circuit having a terminal connected to one of the bonding pads,

a conducting track having first and second opposite ends respectively connected to one of the bonding pads and a further terminal of the first circuit, the track including a portion extending across the second circuit,

a shield interposed between the portion of the track extending across the second circuit for preventing short circuiting of the track to the second circuit and thereby preventing excessive current flow through (a) the first terminal, (b) the first bonding pad and (c) the laser diode electrodes, the second circuit including a trace for supplying current to at least one transistor of the second circuit, the at least one transistor of the second circuit being connected for supplying current to the second electrode,

the track being connected to supply current to at least one transistor of the first circuit, the at least one transistor of the first circuit being connected for supplying current to the first electrode,

the trace and track being located such that a short circuit between them is likely to result in excessive current being supplied to the laser diode via the bonding pads, the track being connected to supply current to at least one transistor of the first circuit, the at least one transistor of the first circuit being connected for supplying current to the first electrode via the first bonding pad,

the shield being interposed between the track and trace for preventing such a short circuit.